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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/613,417

07/03/2003

Yoshifumi Kato

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EXAMINER

CALEY, MICHAEL H

ART UNIT

PAPER NUMBER

2871

NOTIFICATION DATE

DELIVERY MODE

11/05/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/613,417

Applicant(s)

KATO ET AL.

Examiner

Michael H. Caley

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :7/3/03, 12/22/03, 8/22/05, 9/14/06.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 11, 12, and 14-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Shirasaki et al. (U.S. Patent No. 6,025,894 “Shirasaki”).

Regarding claim 1, Shirasaki discloses a lighting system comprising:

a light emitting element (Figure 28 element 114) located between a reflective element (113; Column 33 lines 26-28) and an output element (123, top), wherein the reflective element reflects light incident to the reflective element, and wherein the output element outputs light emitted by the light emitting element (Figure 28); and

a direction shifting element (Figure 28 elements 121 and 122) located between the reflective element and the output element, wherein the direction shifting element reflects or refracts light incident to the direction shifting element, thereby shifting the direction of light incident to the direction shifting element (Column 35 line 64 – Column 36 line 13).

Regarding claim 2, Shirasaki discloses the direction shifting element as reflecting or refracting light incident to the direction shifting element so that light emitted by the light emitting element reaches an interface between the light emitting element and the output element at an angle that is less than the critical angle at the interface (Column 36 lines 57-63).

Regarding claim 3, Shirasaki discloses the light emitting element and the direction shifting element as overlapping one another with respect to a direction perpendicular to the interface (Figure 28).

Regarding claim 4, Shirasaki discloses an interface between the light emitting element and the direction shifting element (Figure 28).

Regarding claim 11, Shirasaki discloses a substrate (110), wherein the light emitting element is located between the substrate and the output element.

Regarding claims 12 and 14, Shirasaki discloses the light emitting element as an organic electroluminescent element (Column 32 line 29).

Regarding claims 15-19, Shirasaki discloses a liquid crystal display unit including a plurality of liquid crystal elements (Figure 35; Column 42 line 20 – Column 43 line 6) located on or above the output element (Figure 35), wherein the display unit displays an image by using light outputted from the output element (Column 43 lines 1-3).

Claims 1, 4-7, 12, 13, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubota et al. (U.S. Patent No. 6,091,384 "Kubota").

Regarding claim 1, Kubota discloses a lighting system comprising:

a light emitting element (Figure 5 element 31) located between a reflective element (Figure 1 element 6; Column 1 lines 21-23, 35-42) and an output element (Figure 1 element 2), wherein the reflective element reflects light incident to the reflective element, and wherein the output element outputs light emitted by the light emitting element (Column 3 lines 30-34); and

a direction shifting element (Figure 8 element 41) located between the reflective element and the output element, wherein the direction shifting element reflects or refracts light incident to the direction shifting element, thereby shifting the direction of light incident to the direction shifting element (Column 5 line 33 – Column 6 line 21).

Regarding claim 4, Kubota further discloses an interface between the light emitting element and the direction shifting element (Figure 8).

Regarding claims 5 and 6, Kubota discloses the direction shifting element as having a refractive index less than that of the light emitting element (Column 5 lines 33-56, Column 1 line 67 - Column 2 line 15).

Regarding claim 7, Kubota discloses the direction shifting element as a prism (Figure 8 element 41).

Regarding claim 12, Kubota discloses the light emitting element as an electroluminescent element (Column 3 lines 44-49).

Regarding claim 13, Kubota discloses the reflective element and the output element as electrodes, and wherein the electroluminescent element emits light when a voltage is applied to the electrodes (Column 3 lines 30-34 and 44-55).

Regarding claim 20, Kubota discloses the reflective element as a plurality of first electrodes extending parallel to each other and generally located in a plane (Figure 1 element 6) and the output element as extending in a direction perpendicular to the first electrodes and generally located in a plane (Figure 1 element 2).

Claims 1 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyatake et al. (U.S. Patent No. 6,947,105 "Miyatake").

Regarding claim 1, Miyatake discloses a lighting system comprising:

a light emitting element (Figure 2 element 23) located between a reflective element (Figure 2 element 24) and an output element (Figure 1 element 5), wherein the reflective element reflects light incident to the reflective element, and wherein the output element outputs light emitted by the light emitting element; and

a direction shifting element (Figure 1 element 4) located between the reflective element and the output element, wherein the direction shifting element reflects or refracts light incident to the direction shifting element, thereby shifting the direction of light incident to the direction shifting element.

Regarding claims 8 and 9, Miyatake discloses the direction shifting element as including a plurality of dispersed particles (Column 11 lines 50-64).

Regarding claim 10, Miyatake discloses the surface of the direction shifting element as specular and wherein the direction shifting element reflects light incident to the direction shifting element (Column 11 lines 50-64).

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael H. Caley whose telephone number is (571) 272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Michael H. Caley". The signature is fluid and cursive, with a large initial "M" and a stylized "C" at the end.

Michael H. Caley
October 2007